

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A multiplexer that is ~~operable to generate~~for generating multiplexed data by multiplexing packets of media data including image data and at least one of audio data and text data, comprising:

a media data obtainment unit ~~operable to obtain~~for obtaining the media data; an analysis unit ~~operable to analyze~~for analyzing the media data obtained by the media data obtainment unit and ~~to obtain~~for obtaining playback start time information that indicates a playback start time of a sample that is a smallest access unit of the image data, audio data and text data included in the media data;

a packetization part determination unit ~~operable to determine~~for determining, based on the playback start time information obtained by the analysis unit, and in all the packets necessary for storing the media data, a packetization part of the media data such that playback start times of respective samples of the image data, audio data and text data that are included in the media data are made to be the same;

a packet header part generation unit ~~operable to generate~~for generating a packet header part that holds a header of the media data on a basis of the packetization part;

a packet data part generation unit ~~operable to generate~~for generating a packet data part that holds entity data of the media data on a basis of the packetization part; and

a packetization unit ~~operable to generate~~for generating a packet by connecting the packet header part with the packet data part.

2. (Currently Amended) The multiplexer according to Claim 1,

wherein the packetization part determination unit is further ~~operable to make~~makes the playback start times of a sample of the audio data placed in a leading part of the packetization part and a sample of the text data the same as the playback start time of a sample of the image data placed in the leading part of the packetization part.

3. (Currently Amended) The multiplexer according to Claim 2,

wherein the packetization part determination unit is further ~~determine~~determines a sample of the audio data and a sample of the text data that are

placed in the leading part of the packetization part as a sample whose playback start time is after the playback start time of a sample of the image data placed in the leading part of the packetization part and the earliest to the playback start time of a sample of the image data.

4. (Currently Amended) The multiplexer according to Claim 2,

wherein the packetization part determination unit is further operable to determine determines a sample of the audio data and a sample of the text data that are placed in the leading part of the packetization part as a sample whose playback start time is before the playback start time of a sample of the image data placed in the leading part of the packetization part and the earliest to the playback start time of a sample of the image data.

5. (Currently Amended) The multiplexer according to Claim 1,

wherein the image data is video data,
the analysis unit is further operable to analyze analyzes the video data obtained by the media data obtainment unit and to obtain obtains intra frame information when the video data includes at least one sample including the intra frame information indicating that the at least one sample is an intra coded sample,

the packetization part determination unit is further operable to determine determines the media data as the packetization part based on the intra frame information and the playback start time information when the analysis unit obtains the intra frame information.

6. (Currently Amended) The multiplexer according to Claim 5,

wherein the packetization part determination unit is further operable to place places a sample of the video data including the intra frame information in a leading part of the packetization part.

7. (Currently Amended) The multiplexer according to Claim 6,

wherein the packetization part determination unit is further operable to

~~makes~~ playback start time of the sample of the video data including the intra frame information placed in the leading part of the packetization part the same as the playback start time of a sample of the audio data and a sample of the text data that are placed in the leading part of the packetization part.

8. (Currently Amended) The multiplexer according to Claim 1,

wherein the packet data part generation unit is further operable to
~~generates~~ a packet data part for storing samples of the media data included in the packetization part by interleaving such that the playback start times of the samples are in an ascending order.

9. (Currently Amended) The multiplexer according to Claim 8,

wherein the packet data part generation unit is further operable to
~~generates~~ the packet data part for storing samples of the media data included in the packetization part by interleaving such that a previously set condition is satisfied.

10. (Previously Presented) A multiplexing method for generating multiplexed data by multiplexing packets of media data including image data and at least one of audio data and text data, comprising:

obtaining the media data;
obtaining playback start time information indicating a playback start time of a sample that is a smallest access unit of the image data, audio data and text data included in the media data by analyzing the media data obtained in said obtaining the media data;
determining, based on the playback start time information obtained in said obtaining playback start time information and in all the packets necessary for storing the media data, a packetization part of the media data such that playback start times of respective samples of the image data, audio data and text data that are included in the media data are made to be the same;

generating a packet header part that holds a header of the media data on a basis of the packetization part;

generating a packet data part that holds entity data of the media data on a basis of

the packetization part; and

generating a packet by connecting the packet header part to the packet data part.

11. (Previously Presented) The multiplexer according to Claim 10,

wherein, in said determining, playback start times of a sample of the audio data and a sample of the text data that are placed in a leading part of the packetization part are made to be the same as the playback start time of a sample of the image data placed in the leading part of the packetization part.

12. (Previously Presented) The multiplexing method according to Claim 10,

wherein the image data is video data, in said obtaining playback start time information intra frame information is obtained when at least one sample including intra frame information indicating that the video data is an intra coded sample is included by analyzing the video data obtained in said obtaining the media data, and

in said determining,

the packetization part of the media data is determined based on the intra frame information and the playback start time information when the intra frame information is obtained in said obtaining playback start time information.

13. (Previously Presented) The multiplexing method according to Claim 12,

wherein in said determining,

a sample of the video data including the intra frame information is placed in a leading part of the packetization part.

14. (Previously Presented) The multiplexing method according to Claim 13,

wherein in said determining,

playback start times of a sample of the audio data and a sample of the text data that are placed in the leading part of the packetization part are made to be the same as a playback start time of a sample of the video data including the intra frame information placed in the leading part of the packetization part.

15. (Previously Presented) The multiplexing method according to Claim 10, wherein in said generating a packet data part, a packet data part for storing samples of the media data included in the packetization part is generated by interleaving such that playback start times of the samples are in an ascending order.

16. (Currently Amended) A computer program recorded on a computer-readable recording medium for a multiplexer that is ~~operable to generate~~ for generating multiplexed data by multiplexing packets of media data including image data and at least one of audio data and text data, the program for causing a computer to execute at least the following in a multiplexing method comprising:

obtaining the media data;

obtaining playback start time information indicating a playback start time of a sample that is a smallest access unit of the image data, audio data and text data included in the media data by analyzing the media data obtained in said obtaining the media data;

determining, based on the playback start time information obtained in said obtaining playback start time information and in all the packets necessary for storing the media data, a packetization part of the media data such that playback start times of respective samples of the image data, audio data and text data that are included in the media data are made to be the same;

generating a packet header part that holds a header of the media data on a basis of packetization part;

generating a packet data part that holds entity data of the media data on a basis of the packetization part; and

generating a packet by connecting the packet header part and the packet data part.

17. (Withdrawn) A demultiplexer that is operable to obtain multiplexed data where media data including image data and at least one of audio data and text data is multiplexed on a basis of a predetermined packetization part, comprising:

a multiplexed data obtainment unit operable to obtain the multiplexed data;

an analysis demultiplex unit operable to analyze the multiplexed data obtained by the multiplexed data obtainment unit, and operable to demultiplex a header part of a

packet from the multiplexed data and to obtain the header part; and

a random access searching unit operable to search only a header of a sample of the image data placed in a leading part of the packet header part demultiplexed by the analysis demultiplex unit and judges whether intra frame information indicating that the sample of the image data included in the packet is an intra coded sample or not at the time of executing random access that is the processing for changing a starting position of demultiplexing of the multiplexed data or starting demultiplexing in a middle of the multiplexed data.